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Critical behavior of the random Potts model

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Abstract

The phase transition in the continual random n-component Potts model is studied by the renormalization group method. It is shown that for the three-dimensional model and n=3 the phase transition is to be of the first order. In the case n=2 which corresponds to the random Ising model the stable fixed point exists as early as in the one-loop approximation of renormalization group equations.

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